UNITED STATES PATENT AND TRADEMARK OFFICE

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09/681,936	06/28/2001	Steven C. Wotring	800549	1062

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ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2004*.

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,9,11-22,24-26,28,30,32-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,9,11-22,24-26,28,30 and 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Examiner acknowledges applicant's amendment filed on 4/27/2004,

paper no. # 8

2.   Claims 1,7,9,18,24,28,30,32 have been amended, paper no. # 8.

3.   Claims 6,8,10,23,27,29,31 have been cancelled, paper no. # 8.

Drawings

4.   The Drawing filed on 2/9/00 is acceptable for examination purposes only; formal

drawings are required in response to this office action. [see 37CFR 1.84 or 1.152].

Information Disclosure Statement

5.   The information disclosure statement filed on 8/19/03, paper no. # 5 has been

considered and a copy was enclosed with this Office Action. [See paper no. # 6].

Priority

6.   Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

based on Provisional Application No. 60/214,892, filed on 29 June 2000.

Double Patenting

7.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
         A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).
         Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

8.   Claims *1-5,7,9,11-22,24-26,28,30,32-34* are rejected under the judicially created

doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of

U.S. Patent No. 6665677. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the claims are arguably directed to

converting or translating relational database structure information into hierarchical data

structure information, specifically mapping relational database field to hierarchical fields,

and broader than Claims 1-9 of US Patent No. 6665677, which encompasses the same

metes, bounds, and limitations. Therefore, it would have been obvious to eliminate the

limitations of the narrower claims, since it has been held that omission of an element

and its function and a combination where the remaining elements perform the same

functions as before involves only routine skill in the art See In re Karlson (CCPA) 136

USPQ 184, decided January 16, 1963, Appl. No. 6857 which states *"omission of*

elements and its function in combination is obvious expedient if remaining elements

perform same functions as before. "

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9.   Claims *1-5,7,9,11-22,24-26,28,30,32-34* are rejected under 35 U.S.C. 102(a) as

being anticipated by Sacks, US Patent No. 5974407.

10.   As to Claims 1,18,24, Sacks teaches a system which including 'sharing data

between relational database and a hierarchical database' [see Abstract, fig 2, col 1,

line 9-12], Sacks specifically teaches for example both hierarchical database and

relational database, hierarchical database corresponds to fig 2, element 2-24, relational

database corresponds to fig 2, element 2-12, 'defining a hierarchical data entity

including a plurality of simple and compound elements' [col 5, line 25-31, col 7, line 58-

67, fig 1A-1E], Sacks is directed to hierarchical database, more specifically defining

hierarchical database that satisfies at minimum first a hierarchical database, second,

hierarchical database specifying root conditions and child conditions and like as detailed

in col 7, line 60-67, simple and compound elements corresponds to fig 1A-1B because

Sacks specifically teaches database schema where table names are associated with

respective table ID numbers [see fig 1A], further, fig 1B is specifically directed to parent

and child relation that corresponds to compound elements [see fig iB], as best

understood by the examiner, simple elements are integral part of compound elements;

'identifying an entity path' [see fig 3A], Sacks specifically teaches entity relation

among various tables for example one to many, many to one, many to many and like

such as 3A-24, 3A-25,3A-12 that corresponds to entity path;

'mapped fields in each simple element'[col 15, line 66-67, fig 8B-9A], Sacks

specifically teaches mapping of various fields that including simple and compound

elements as detailed in fig 8B-9A;

'mapping each of the plurality of elements in the hierarchical data entity to

information in a relational dataset contained in a relational database' [col 15, line 48-67,

col 16, line 1-13, fig 8B-9A,], Sacks specifically teaches mapping data between

hierarchical and relational databases, plurality of elements corresponds to fig 9A,-

12,9A-18 and like as detailed in fig 8B-9A;

'for each compound element, specifying a data source,[see 9C-18 maps to the

row of 8B-20] that corresponds to specifying data source to the data target;

'specifying a database command, executing the database command, receiving

database field names from the relational database' [col 18, line 1-17], Sacks specifically

teaches database command, executing database command for example SQL queries

as detailed in 9C-10; 'adding the database field names to the compound element' [col

19, line 62-67];

'for each simple element, selecting a database field name in a parent element corresponding to the simple element, and specifying a data transformation algorithm associated with the simple element'[col 20, line 35-67];

'transforming the relational dataset information into corresponding mapped elements in the hierarchical data entity to form a hierarchical data structure' [col 16, line 46-60], Sacks specifically teaches for example hierarchical database consists of root node and child nodes such as detailed in fig 9A-18,9A-20,9A-30 and also noted that these are equivalent to rows such that the hkey value is the same as the parent as detailed in col 16, line 54-60;

'accessing data from the hierarchical data structure corresponding to the relational dataset information in the relational database' [col 17, line 66-67, col 18, line 1-10].

11. As to Claims 2, 4, 19, 21, 25-26, the limitations of this claim have been noted in the above rejection, In addition, Sacks disclosed 'defining a hierarchical data entity comprises defining a hierarchical data entity' [col 7, line 50-67, col 16, line 3-12, fig 1A-1E, fig 15], Sacks specifically teaches for example entity-relation in hierarchical databases as detailed in fig 15, 'mapping information corresponds to fig 9A-9C.

12. As to Claim 3, 20, the limitations of this claim have been noted in the above rejection. In addition, Sacks disclosed 'identifying each of the plurality of elements by an element name without reference to an entity path' [fig 9A-9C].

13.   As to Claim 5, 22,the limitations of this claim have been noted in the above

rejection. In addition, Sacks disclosed 'plurality of elements by an entity path

referencing all parent elements in the entity path' [col 8, line 49-67, fig 1B-iD], entity

path referencing all parent elements corresponds to hierarchical family with root 1D-10

having root entry 1D-14, under parent, child levels as detailed in fig 1B-1D.

14.   As to Claim 7, 28, the limitations of this claim have been noted in the rejection

above. In addition, Sacks disclosed 'simple element comprises identifying an element

name and mapped fields' in each simple element [fig 1D-1E,col 9, line 1-15].

15.   As to Claim 9, 30, the limitations of this claim have been noted in the rejection

above. In addition, Sacks disclosed 'compound element comprises identifying an

element name, a database name, a database command and database fields in each

compound element' [col 9, line 1-15].

16.   As to Claim 11, the limitations of this claim have been noted in the rejection

above. In addition, Sacks disclosed 'reading the hierarchical data entity' [col 11, line 34-

36, fig 4], 'determining if a root element is present' [col 11, line 44-46, 4-16], 'ending the

mapping process if no root element is present' [col 11, line 44-46], 'mapping each

compound element of the plurality of elements if a root element is present' [col 11, line

49-51], 'mapping each simple element of the plurality of elements if a root element is

present' [col 10, line 35-46, fig 3A].

17.   As to Claim 12, the limitations of this claim have been noted in the rejection

above.. In addition, Sacks disclosed 'specifying a database comm. Expression for the

compound element' [col 11, line 59-63], 'executing the database command expression'

[fig 9C-9D].

18.   The limitations of Claims 13-16 have already been discussed in the rejection of

claims 1-12 above. They are therefore rejected on the same grounds.

19.   As to Claim 32, 34, Sacks teaches a system which including 'a data structure for

sharing data between relational and hierarchical databases' [see fig 2], 'a hierarchical

data structure having a plurality of simple and compound elements stored in the

memory' [col 5, line 32-36, line 37-41];

       'database commands embedded in the compound elements for accessing

information in a relational database' [col 17, line 66-67, col 18, line 1-10], 'tabular

datasets created in the memory for storing the accessed information from the relational

database' [col 20, line 55-63];

       'mappings of the plurality of simple and compound elements in the hierarchical

data entity to information in relational datasets contained in the relational database if a

root element is present' [col 15, line 48-67, col 16, line 1-13, fig 8B-9A,], Sacks

specifically teaches mapping data between hierarchical and relational databases,

plurality of elements corresponds to fig 9A,-12,9A-18 and like as detailed in fig 8B-9A;

'for each compound element, specifying a data source,[see 9C-18 maps to the

row of 8B-20] that corresponds to specifying data source to the data target;

'specifying a database command, executing the database command, receiving

database field names from the relational database' [col 18, line 1-17], Sacks specifically

teaches database command, executing database command for example SQL queries

as detailed in 9C-10; 'adding the database field names to the compound element' [col

19, line 62-67];

'for each simple element, selecting a database field name in a parent element

corresponding to the simple element, and specifying a data transformation algorithm

associated with the simple element'[col 20, line 35-67];

'transforming the relational dataset information into corresponding mapped

elements in the hierarchical data entity to form a hierarchical data structure' [col 16, line

46-60], Sacks specifically teaches for example hierarchical database consists of root

node and child nodes such as detailed in fig 9A-18,9A-20,9A-30 and also noted that

these are equivalent to rows such that the hkey value is the same as the parent as

detailed in col 16, line 54-60;

'a relationship between the elements of the hierarchical data structure and the

tabular datasets' [col 25, line 7-20].

20.   As to Claim 33, the limitations of this claim have been noted in the above

rejection. In addition, Sacks disclosed 'an element name property' [col 15, line 5-6], 'a

database name property' [col 15, line 38-39], 'a database command expression' [col 15,

line 39-42], a database fields property' [col 18, line 31-41].

Response to Arguments

21.   Applicant's arguments filed 4/27/2004 with respective to claims 1-32 have been

fully considered but they are not persuasive, for examiner's response, see discussion

below:

a)   At page 17, applicant argues, "applicant's invention relies on defined data paths

and element names for determining hierarchical data structure,..........

        As to the above argument [a], Sacks directed to hierarchical database

management system, more specifically hierarchical database structure including

schema that have various table names corresponding to table Ids, further it is noted that

hierarchical data structure itself has root or parent and child relationship as detailed in

fig 1B.

b)   At page 18, Claims 1,18,24, applicant argues that "there is no teaching or

suggestion in Sacks reference for defining a hierarchal data entity including plurality of

simple and compound elements..........

As to the above argument [b], examiner disagree with the applicant because

Sacks specifically teaches hierarchical database structure defining parent-child

relationship as detailed in fig 1B, also database schema where table names are

associated with respective table ID numbers [see fig 1A], further, fig 1B,3A is

specifically directed to parent and child relation that corresponds to compound elements

[see fig iB], as best understood by the examiner, simple elements are integral part of

compound elements.

c)   At page 18, claims 1,18,24, applicant argues "simple and compound elements of

the hierarchical data entity include attributes for identifying paths, fields, database and

commands for data structure...

d)   At page 19, claims 1,18,24, applicant argues that Sacks reference does not

teach 'specifying a database command, executing the database command, receiving

database fields names from the relational database...........

As to the above argument [c-d], Sacks specifically teaches hierarchical data

entity [see fig 3A] where parent table and child table(s) have relationships and is integral

part of hierarchical data structure, further Sacks also specifically defines various fields,

attributes, data type, description of the fields and like as detailed in fig 3B and fig 4 that

specifically identifies attributes, paths, fields within the hierarchical data structure, also it

is noted that Sakes suggests database commands such as detailed in specifying

hierarchical views [see col 13, line 31-34].

e)   At page 19, claims 1,18,24 applicant argues that there is no teaching or

suggestion in the Sacks reference for "mapping each of the plurality of elements in the

hierarchical data entity to information in a relational dataset contained in a relational

database........."

As to the above argument [e], as best understood by the examiner, Sacks

specifically teaches mapping data between hierarchical and relational databases,

plurality of elements corresponds to fig 9A,-12,9A-18 and like as detailed in fig 8B-9A;

f)   At page 20, claims 1,18,24, applicant argues that there is no teaching or

suggestion in the Sacks reference for "transforming the relational dataset information

into corresponding mapped elements in the hierarchical data entity to form a

hierarchical data structure...."

As to the above argument [f], as best understood by the examiner, Sacks

specifically teaches for example hierarchical database consists of root node and child

nodes such as detailed in fig 9A-18, 9A-20, 9A-30 and also noted that these are

equivalent to rows such that the hkey value is the same as the parent as detailed in col

16, line 54-60, further it is noted that Sacks suggests hierarchical database data tables

used for storing hierarchal data and create and store tables in relational database that

corresponds to transforming dataset from one data structure to another data structure

as detailed in col 9, line 54-65

g)   At page 20, claim 1,18,24, applicant argues that there is no suggestion or

teaching in the Sacks reference for "accessing data from the hierarchical data structure

corresponding to the relational dataset information in the relational database...

As to the above argument [g], as best understood by the examiner, Sacks firstly

teaches creating hierarichcal views [see fig 4, fig 9A], secondly, Sacks also teaches

SQL expression(s) for generating various hierarchical views as detailed in fig 9A, thirdly,

Sacks also specifically directed to accessing database table using SQL queries that

corresponds to accessing data or accessing specific table information as detailed in

col 17, line 66-67, col 18, line 1-10.

h)   At page 21, claims 2,4,19,21,25,26 there is no corresponding compound

elements disclosed in Sacks that include an element name, database name, database

command, and database fields...

As to the above argument [h], as best understood by the examiner, Sacks

teaches hierarchical data structure and relational data structure, Sacks also teaches

creating views from the data tables [see fig 4], further, Sacks also teaches various

fields, data type, field name, and description [see fig 3B5A-5B], also it is noted that

Sacks specifically teaches hierarchical and relational databases where relational data

tables used for constructing hierarchical database [see Abstract]. Sacks also

specifically teach accessing data from various tables using SQL queries as detailed in

col 18, line 11-22].

i)   At page 22, claims 2,4,19,21,25,26, there is no disclosure in Sacks of a

hierarchical map structure or a hierarchical data entity......

As to the above argument [I], examiner disagree with the applicant because

Sacks specifically directed to hierarchical data structure where parent-child relation

shown, further Sacks also teaches mapping data entity as detailed in [col 15, line 48-67,

col 16, line 1-13, fig 8B-9A

j)   At page 22, claims 3 and 20, applicant argues that comparison of applicants' fig 3

with the Sacks reference fig 9A-9C cited by office reveals patentably distinguishable

features........

As to the above argument [j], as best understood by the examiner Sacks

reference does teaches for example field names or element names as detailed in fig 9A-

9C are without reference to specific name and entity path.

k)   At page 22, claims 5 and 22 applicant argues that there is no disclosure in the

Sacks's fig 1B-iD of identifying each of the plurality of elements........

As to the above argument [k}, examiner disagreee with the applicant because

Sacks specifically directed to identifying each of the elements and their relationships or

entity path referring to the root elements as detailed in fig 1B-iD.

l)   At page 22, claims 7-8,28-29, there is no disclosure in Sacks fig 1D-iE........

As to the argument [l], examiner acknowledges that claims 8 and 29 are cancelled, and claims 7 and 28 are directed to identifying a element name and mapped fields...... disclosed by Sacks [see fig 1D-1E,col 9, line 1-15] because Sacks specifically teaches transformation or mapping of hierarchical data structure into relational data structure [see Abstract].

m)   At page 23, claims 9,10,30,31, applicant argues that there is no disclosure of claims 9 and 30 in fig 1E in Sacks reference......

As to the argument [m], examiner acknowledges that claims 10 and 31 are cancelled, and claims 9 and 30 are directed to identifying an element name, a database name, a database command and database fields in each compound element as detailed in col 9 1-15, line 58-65.

n)   At page 23-24, claim 11, applicant argues that the element of applicants' claim 11 is patentably distinguishable...........

As to the argument [n], as best understood by the examiner, Sacks teaches hierarchical data structure having parent child relations as detailed in gi 3A, also fig 3A is simply directed to show various tables for example parent table, child tables and its relationships have been disclosed, further Sacks also disclosed mapping of various elements as detailed in col 11, line 49-51.

o)   At page 25, claim 12, applicant argues that there is no teaching in the Sacks

reference.........

As to the above argument [o], as best understood by the examiner, Sacks

specifically teaches data source, database commands and field names and dataset

fields for mapping the information in the dataset as detailed in col 11, line 59-63,

especially executing database commands see fig 9C-9D

p)   At page 25, claim 13-16, 32-34 examiner applied above discussed arguments

Conclusion

The prior art made of record

a.   US Patent No.   5974407

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure

b.	US Patent No.	6539398
c.	US Patent No.	5724577
d.	US Patent No.	6199059
e.	US Patent No.	6480857
f.	US Patent No.	6101502
g.	US Patent No.	6594672
h.	US Patent No.	5717924
i.	US Patent No.	6076090
j.	US Patent No.	6374252
k.	US Patent No.	6377934
l.		WO 00/23917

Meier A et al. Hierarchical to relational database migration,

Software IEEE vol 11, issue :3, may 1994, pp 21-27.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703)308-8538.   The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time. The TC2100's Customer Service number is (703)306-5631.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703)305-9790. The fax phone numbers for the organization where the application or proceeding is assigned are as follows:

703/746-7238   **(After Final Communication)**

703/872-9306   **(Offical Communications)**

703/746-7240   **(For Status inquiries, draft communication)**

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)305-9600.

sc
Patent Examiner.
June 9, 2004.